

# United States Circuit Court

OF APPEALS.

NINTH CIRCUIT.

JOHNSON COMPANY,

*Appellant,*

*vs.*

PACIFIC ROLLING MILLS COMPANY,

*Appellee.*

No. 33.

JOHNSON COMPANY,

*Appellant,*

*vs.*

SUTTER STREET RAILWAY COMPANY,

*Appellee.*

No. 34.

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## Brief of Appellees.

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FILED



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THE JOHNSON COMPANY,

*Complainant and Appellant,*

vs.

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No. 34.

*Brief of Appellee.*

These are actions in equity, brought to recover for an alleged infringement of letters patent number 272,554, bearing date February 20, 1883, granted to Tom L. Johnson for a street railroad rail, and assigned by him to the complainant.

Both of these actions were brought upon the same patent, and in both actions the same article was alleged to be an infringement. Both cases were tried together, and upon the same testimony and stipulated facts. We therefore present them both to this Court in one argument.

This patent differs from most others in that it is for a mere *form* of rail. Most contests for infringement are either upon machines which have mechanical action and the *movements and operations* of mechanical devices are brought into discussion, or they are upon patents which are for some kind of process. The present patent, however, is not for anything that involves either mechanical action or a patentable process, but *is for a mere form alone*.

In the specifications of the patent, Record page 43, it states as follows, viz :

“ The object of my said invention is to *improve the form* of that  
 “ class of railroad rails, used principally by street railroads, which  
 “ combine the principal features of the tram-rail, ordinarily used  
 “ for such purposes, and those of the T-rail used on steam rail-  
 “ roads.”

“ I am aware that rails embodying the general features above mentioned are old, and therefore disclaim the same, and *confine myself to the form hereinafter particularly described and claimed as new.*”

As a general rule, a mere change of the form of a device never was patentable. It is a different thing, however, if such change of form creates a new mode of operation which the device was unable to perform in any of its former shapes. We freely admit that whenever an inventor discovers that by changing the form of a device, he can make that device operate in a new method which was not before known, and make it perform duties in its new form which are essentially different from the kind of duties which it would perform in any of its old shapes; that such inventor is entitled to a patent for such new form of the device.

The rule is stated by the U. S. Supreme Court, in the case of *Winans vs. Denmead*, 15 Howard, at page 341, as follows:

“ Under our law, a patent cannot be granted merely for a change of form. The act of February 21, 1793, section 2, so declared in express terms, and though this declaratory law was not re-enacted in the patent act of 1836, it is a principle which necessarily makes part of every system of law, granting patents for new inventions. Merely to change the form of a machine is the work of a constructor, not of an inventor; such a change cannot be deemed an invention. Nor does the plaintiff’s patent rest upon such a change. To change the form of an existing machine, and by means of such change to introduce and employ other mechanical principles or natural powers, or, as it is termed, a new mode of operation and thus attain a new and useful result, is the subject of a patent.”

In the case cited, *Winans vs. Denmead*, the patent was for a new form of car body, especially designed for the transportation of coal. In the ordinary rectangular form of car bodies used for transporting coal, a great difficulty had been encountered on account of the tendency of the coal to keep settling and packing tightly from the constant jar of the car and pressing outwards against the sides of the car body so that it required a car body of immense strength and great weight to carry a comparatively small amount of coal. The patentee had discovered that by making the car body cone shape so that its sides flared outward, the packing of the coal was avoided and the same car with such improved body was capable of carrying twice as much coal at a load as it was capable of carrying with the former car bodies. In that case *the inventor discovered a new mode of operation* which prevented the coal from packing, by means of the conical shaped car bodies. It was an original discovery of a new principle in mechanism and not a mere change of form, the result of which could be calculated in advance by a competent mechanic.

The appellees contend in this case: first, that the appellant’s

patent is absolutely void, for the reason that it is only for one specific form of the well-known girder rails and that such specific form *did not develop any new or unknown modes of operation*. That the patented form of the rail, even if it was slightly different from any other form of rail that had ever been made, involved only such difference of operation or difference in results in its new form as mechanics well knew would belong to such new form and they could form a mathematical calculation of such different results from their knowledge of what different results belonged to different forms of rails, in advance of such particular form of rail being tried and tested.

As for instance, if it was made lighter and contained less metal than other rails, mechanics would then know it would be weaker and have less strength than other rails, for the reason that it was made lighter than the other rails. If the vertical web was made wider so that the rail was higher from its bottom to its top than other rails, mechanics would know that with the same amount of metal in it, it would have greater vertical strength than other rails, simply because it is a well-known fact in mechanics, that the greater depth such rail has, the greater will be its vertical strength. A joist twelve inches wide and two inches thick will sustain a much greater weight without breaking when it is turned upon its edge, than it will sustain if the weight is placed upon it while the joist lies flatways. So if the rail had a wider foot or wider flange at its top, it would sustain a correspondingly greater side thrust without bending, was a fact which was also well-known to mechanics. Also if that part of the head of the rail on which the car wheels bore, was directly over the web of the rail, it would have a greater direct vertical depth to sustain the weight of the cars, and would therefore sustain a greater weight of cars than it would sustain when the same part of the head was placed at one side of the vertical line of the web, as it is in the patent. If there was any object in having the fish plates which were placed upon the opposite sides of the rail of the same width, it was well-known to mechanics that such result could be effected by making the space on one side of the rail, into which the fish plate was to fit, just as wide as was the corresponding space on the opposite side of the same rail, into which the opposite fish plate would fit. This was the ordinary way of using fish plates upon all ordinary steam railroads. Mechanics also perfectly well understood that whatever space was left between the flanges of the head of the rail and the flanges which formed the foot of the rail, would form the "pockets" for street paving materials which are mentioned in the patent, and also, that such pockets could be formed and shaped to suit the wish of the constructor, whatever such form and shape might be. In other words, there is nothing about the operation of the patented form of the rail, that ordinary mechanics, who were familiar with the manu-

facture of rails, would not know by virtue of their knowledge as mechanics. *It is in fact, not pretended we believe any where in the testimony that the patentee discovered, that any new results, or any new kind of results, would flow from that particular form of the rail, except such as were well-known and could be calculated in advance by mechanics familiar with the manufacture of railroads.*

In the testimony given by the appellant's expert, he explains that such and such results *follow from the form* of the patented rail. He does not, however, undertake to testify that the patentee was the first to discover or know that such results would follow. The manner of giving his testimony by the expert shows that he knew that the results would follow from the form because it was a well-known fact that each item of result that was due to each item of form had always been well-known. He says: Record page 20.

"The patent of Johnson describes an improved form of rail, intended principally for use in streets for car service on street railway service. The rail described in the patent is designed to present many of the *advantages of the T-rail* and possessing also some *of the advantages of an ordinary tram rail.*"

In this statement, which corresponds with the patent, is explained what is above asserted, viz: that all of the advantages presented by the new rail were old and had been presented in former rails, including the well-known T-rails and tram rails. These advantages, therefore, were all old and well-known to mechanics. There was no new operation or new mode of operation developed in the form of the rail. The statement is that a part of the advantages were possessed by the old T-rail and some of the advantages were possessed by the ordinary tram rail. The most according to this statement of the expert that the patentee did, was to incorporate in one rail, some of the well-known advantages belonging to the ordinary T-rail and some of the well-known advantages of the ordinary tram rail. Transcript, pages 20 and 21.

*Even fish plating on the two sides of the rail was one of the features of the ordinary T-rail.*

From all this we think the Court cannot doubt but that the designing of the patented rail was the result of mere mechanical calculation. That there is nothing in it which—as the Supreme Court says in *Hollister vs. Benedict Manufacturing Co.*, 113 U. S., on page 72—seems "to spring from that intuitive faculty of the mind, put forth in the search for new results, or new methods, creating what had not before existed, or bringing to light what lay hidden from vision; but, on the other hand, to be the suggestion of that common experience which arose spontaneously and by a necessity of human reasoning, in the minds of those who had become acquainted with the circumstances with which they had to deal."

We think the making of this form of rail comes under the definition of what the Supreme Court said was *not* invention in the case

of "Packing Company Cases," 105, U. S. on pages 571 and 572, where quoting from prior decisions, it says: "All improvement is not invention, and entitled to protection as such. Thus, to entitle it, it ought to be the product of some exercise of the inventive faculties, and *it must involve something more than what is obvious to persons skilled in the art.*" (Citing several cases.)

The only reason why the last quotation is not strictly applicable to the appellant's rail, is because the quotation applies to an actual *improvement*, while we claim that the testimony in this case, fairly shows that the form of rail patented was a detriment and no improvement as compared with the old California street rail and rails possessing the "general feature above mentioned" which are disclaimed in the patent. (See the first fourteen lines of the specifications.) Record page 43.

We insist that neither the patent nor the testimony show anything in the formation of the patented rail, excepting only that which was a mere matter of mechanical calculation which any rail manufacturer might make, and know when he made it, and all the while that he was making it, just what the result would be, without the making of any experiments to ascertain what would be the result or mode of operation either of the rail as a whole, or of any feature presented in the entire details of its construction. There was no original conception of anything new or not already known; no search for new results or new methods but only applying old and well-known forms for obtaining old and well-known results, by old and well-known methods; no bringing to light what lay hidden from vision; but only taking certain details of construction on which the full light of the noon-day sun had shown and on which human vision had rested for more than a generation, and putting those details of construction together in an awkward manner and thereby forming a rail so inferior to others that good mechanics refuse to use it.

There was not a feature about it either of form or operation, that was not already "*obvious to persons skilled in the art*" of rail making.

We claim that the patent sued on is void, for the reason among others, that it is a patent for a mere form that developed no new mode of operation and did not involve any invention.

We pause here to cite the Court to the case of *Busell Trimmer Co. vs. Stevens*, 137 U. S. 423. The decision stated is so exactly in point that we will here present it. In its opinion on page 433, the Supreme Court says:

"Effort was made to show by other witnesses that the features in the Orcutt patent, specified in the statement of counsel above quoted, are all patentable novelties, especially *the combination of them into one device*. We repeat, that in view of the previous state of the art, we think otherwise. The evidence, taken as a whole, shows that *all of those claimed elements are to be found in various*

“ prior patents—some in one patent, and some in another, but all performing like functions in well-known inventions having the same object as the Orcutt patent, and that there is no substantial difference between the Brown metal-cutter and Orcutt’s cutter, except in the configuration of their molded surfaces. That difference, to our minds, is not a patentable difference, even though the one cutter was used in the metal art, and the other in the leather art. A combination of old elements, such as are found in the patented device in suit, does not constitute a patentable invention. (*Florsheim v. Schilling*, ante, 64, decided at this term of the Court, and cases there cited,)” and further, on page 435:

“But the patent before use is no such case. The most that can be said of it is that it shows, on the part of Orcutt, great industry in acquiring a thorough knowledge of what others had done in the attempt to trim shoe-soles in a rapid and improved mode, by the various devices perfected by patents for that purpose, good judgment in selecting and combining the best of them, with no little mechanical skill in their application; *but it presents no discoverable trace of the exercise of original thought.*”

What we ask is there in the patented rail according to the appellant’s own showing other than taking well-known elements or forms of other well-known rails in which the same functions were performed by the same forms as in the patented rail, some parts of the form being so taken from one rail and some from another, but all performing like functions in these old well-known rails, and aggregating those older forms into the patented rail? Does this not clearly come within the quotation just made from the recent decision that:

“ A combination of old elements such as are found in the patented device in suit, does not constitute a patentable invention.”

The following quotation from the closing part of the same opinion is also, we think, strongly in point.

“ *It may be admitted that Orcutt’s later patent performed the work it was designed to accomplish in a better and more workmanlike manner than any of the preceding cutters patented, because, as already stated, there were constant improvements in the art to which it related. So far as this record shows, it was the last of a series of patents designed to accomplish the same object. As such, it necessarily retained all the beneficial features of those earlier patents, and, to a certain extent, improved upon them. Such improvement, however, was an improvement in degree only, and was therefore not patentable. (Burt vs. Ivory, 133 U. S., 349, and cases there cited.)*”

The decision was against a patent which came much nearer showing a patentable invention than does the appellant’s patent. In the case cited the patent described a very ingenious machine made up of movable parts. The machine was confessedly a better machine



than any which preceded it. It combined for the first time in one machine, the *particular form* of elements of which it was composed. Although other combinations of the *same kind* of elements with *less perfect forms* had been made, and the same perfected form of elements which the patentee embodied in his one machine, had been severally used in different machines of the same general character and used for the same purpose, yet the patentee for the first time brought together in one machine, the best form of the elements which could be found in all the various machines of that kind; and in doing so, as the Supreme Court admits, he displayed "great industry in acquiring a thorough knowledge of what others had done" and also "good judgment in selecting and combining the best" of the various devices which others had used in the same class of machines, and "no little mechanical skill" in doing so, but it was not invention.

In the appellant's case, all that the patentee did was to pick out certain *existing* details of forms from well-known rails and combine for the first time those details of forms in one rail. We deny that in doing so he displayed even good judgment since his rail is not as good as other rails. The evidence of Patrick Noble shows that it is an inferior rail, and his testimony is not contradicted. (Transcript, pages 31-32.) It is a rail made up of forms which the appellee does not and would not use. Nor does the testimony show that the appellant who owns the patent uses it. It is a common practice in the trial of patent cases for the complainant to prove, when such is the fact, that the patented device has gone into use since the patentee made the invention and has to that extent supplanted other devices of the same general class which the public were already using for the same purposes that the patented invention was applicable to. Such facts, when proved, are very strong evidence of both the novelty and utility of the patented invention. If such facts are not shown, it leaves the presumption very strong that the patented device is not as good as those that preceded it.

It is a well recognized rule of evidence in patent cases, that extensive use is evidence of utility and great utility and extended use *after* the invention is made by the patentee is evidence of novelty and invention.

See *Adams vs. Edwards*, 1 Fisher's Patent Cases, page 6.

*Parker vs. Hulme*, *ibid* 53.

*Many vs. Sizer*, *ibid* 24, 27 and 28.

*Magowan vs. New York Belting Co.*, 141 U. S., page 343, and references there cited.

The reverse of this rule follows as a matter of course, viz: That non-use of an invention after the patent is granted, shows want of utility and lack of novelty.

Not only does it not appear that the patentee of this form of rail exercised good judgment in the selection of forms from other rails,

but it also appears from the nature of the patent that it required no mechanical ingenuity whatever to make up the combination of forms shown. A mere form can be made on paper with a full knowledge that the device can be made in that form. It is a very different thing, however, when working devices are combined as it often requires the highest degree of mechanical skill to so put them together that they will be operative in making their intended movements. It is a well-known and constantly recognized fact among mechanics that the several parts of an apparently operative machine may be drawn out on paper and as so drawn, good mechanics will see no reason why the parts, when constructed as drawn, will not be operative; and yet, when the parts are constructed they will be found to be totally inoperative, for the reason that nature will raise and present natural obstacles which the mechanic did not foresee. Thousands of perpetual motion machines have been drawn by skilled mechanics, on paper, which looked as though they could not fail to go, and thousands upon thousands of dollars have been expended by such skilled mechanics in efforts to make them go, and in the firm belief that they finally would go; but none of them ever went yet. The very best constructors and mechanics approach the trials of their new machines with apprehension for fear that they may fail to work satisfactorily. In probably nine cases out of ten the first trial of a finished machine of a new kind, will require many alterations before it will do its intended work, and not unfrequently such new machines, even when designed by the most experienced and skilled constructors and mechanics, turn out to be worthless, and have to be totally abandoned for the reason that they utterly fail to perform the work for which they were intended. Long as the "Keely Motor" has been a practical failure, hopes are still entertained that it may yet succeed and work a revolution in the motor power of the world. The exact weight, tonnage, and water displacement of the U. S. war vessel "Charleston" could be and was accurately calculated in advance of her construction, and pictures of what she would look like when built, were easily made with accurate certainty. But when her mechanical performance was to be foretold, it could only be approximately estimated. Yet every part of her machinery and boilers and furnaces were but duplicates of what had been made and tested and tried a thousand times in other places, and in other machinery. With what feelings of apprehension and hope and fear were her trial trips watched in order to learn at what speed her machinery would be capable of driving her. We repeat that the boot trimming machine, being made up of working devices, whose several actions must be made to harmonize with each other, required a vast amount more of ingenuity and skill for its construction, than was required in merely forming the appellant's rail. As between the trimming machine which was declared not to contain any patentable invention by the Supreme

Court in the case cited and the appellant's rail, the former came very much nearer the line of invention than does the latter.

In the case of *Smith vs. Nichols*, 21 Wallace, on page 119, the Supreme Court says :

“ But a mere carrying forward, or new or more extended application of the original thought, a change only in form, proportions or degree, the substitution of equivalents, doing substantially the same thing in the same way, by substantially the same means *with better results*, is not such invention as will sustain a patent. These rules apply alike, whether what preceded was covered by a patent or rested only in public knowledge and use. In neither case can there be an invasion of such domain and an appropriation of anything found there. In one case, everything belongs to the prior patentee, in the other, to the public at large.”

The foregoing is but a redeclaration of previous authorities to the effect that a change only *in form or degree* of things already in existence, which does substantially the same thing in the same way and with substantially the same means, *although with better results*, is not such an improvement as will sustain a patent. This quotation from *Smith vs. Nichols*, was in substance repeated by the Supreme Court in *Dunbar vs. Myers*, 94 U. S. on page 199. It was also requoted by the Supreme Court in *Burt vs. Evory* 133, U. S., on pages 358 and 359. This case of *Smith vs. Nichols*, 21 Wall., 115, has been repeatedly by the U. S. Supreme Court, and was cited as authority in *Reckendorfer vs. Faber*, 92 U. S., 354.

*Roberts vs. Ryer*, 91 U. S., 159.

*Phillips vs. Detroit*, 111 U. S. 607.

*Morris vs. McMillin*, 112 U. S. 249.

*Stephenson vs. Brooklyn R. R. Co.*, 114, U. S. 154.

*Dunbar vs. Meyers*, 94 U. S., 199.

*Burt vs. Evory*, 133 U. S., 358.

*International Tooth Crown Co., vs. Gaylord*, 140 U. S., 62.

*Butler vs. Steckel*, 137 U. S., 29.

*Penn. R. R. Co. vs. Locomotive Truck Co.*, 110 U. S., 494.

In the case of *Hill vs. Wooster*, 132 U. S., on page 700, the Court says :

“ This Court, however, has repeatedly held that, under the Constitution and the Acts of Congress, a person to be entitled to a patent, must have invented or discovered some new and useful art, machine, manufacture or composition of matter, or some new and useful improvement thereof, and that *it is not enough that a thing shall be new, in the sense that in the shape or form in which it is produced, it shall not have been before known*, and that it shall be useful, but it must, under the Constitution and the statute, amount to an invention or discovery,” citing a long list of authorities.

The foregoing quotation was repeated by the Supreme Court with approval in *Burt vs. Evory*, 133 U. S., on page 359. As a result

following the rule contained in the quotation, the Court held that the patent sued upon in *Burt vs. Ivory*, which was for an improved shoe, was void, for the reason that what was covered by it was "merely a carrying forward of the original idea of the earlier patents on the same subject, *simply a change in form and arrangement of the constituent parts of the shoe, or an improvement in degree only.*"

Two of the late decisions rendered by the Supreme Court, *Butler vs. Steckel*, 137 U. S., 21, and *Shenfield vs. The Nashawannuck Manufacturing Co.*, 137 U. S. 56, were brought on patents that were substantially for forms. The first patent included the form of a die for cutting dough so as to make a form for "bretzels" that would give them the appearance of being made by hand. The second patent was for making suspender ends of flat cord bent into a loop, laid flatwise and fastened in a particular way. In both cases the Supreme Court decided that the patents were invalid for the reason that they did not cover any patentable invention.

It seems to us that under the foregoing decisions and the tests therein applied for determining when a form may be patentable, that the appellant's patent is invalid and the decrees should be affirmed upon this ground.

The appellant's patent is for a form only. Such form, even if it was new with the patentee, consists only in changing very slightly the old form of rails. As to such new form, the patentee in his specifications of the patent says: "I am aware that rails *embodying the general features above mentioned are old, and I therefore disclaim the same, and confine myself to the form hereinafter particularly described and claimed as new.*" Thus, by the very terms of the patent, the change of form which was made by the patentee could have been an improvement in degree only. The "general features" were old. It was a change *in form only*. Taking the patent for all that it itself says, and also for all that is said for it in the testimony, the patentee did nothing except to take rails which possessed certain general features or details of form and change those details of form to a greater or less degree and nothing else. The changes were not only confined to changes of form, but they were confined to changing the old forms in matters of degree only. The old rails had each a foot and web and a flange opposite to the head and those feet and web and heads and flanges furnished pockets for the reception and retention of the paving material. The patentee claims to have changed the form of the foot, web, head and flange so as to make a larger pocket for the paving material than the old rails furnished. He also claims to have changed the form so as to put the shoulder on one side of the web, against which the upper side of the fish plate bears in a lower position than it was placed at in the old California Street rail. What after all is said that has been said or can be said, are these changes except changes in degree only. In the

old California Street rails there was a foot for each rail, and there was also a web, and there was a head on one side and a flange on the other side, and there was a shoulder on each side against which the upper edges of the fish plates bore. The parts were all there and the rails were good practicable rails. They were *good enough to be used*, a fact which does not appear to apply to the patented rails. Was the putting of the shoulder against which the edge of the fish plate bore in a lower position than it was before, anything except a change in the degree of its height? Of course not. Was the idea of making the fish plate on one side of the web of the same width that it was on the other side, anything but a change in degree as to the width of the fish plate? Of course not. There was no result following this making of the fish plates of equal width except the mere fact that they *were* of such equal width. No new mode of operation followed making them of equal width nor did any other material advantage follow. The fish plates were equally useful, and equally effective, and operated in exactly the same manner when they were of unequal widths as when they were of equal widths. They were of equal widths on all ordinary steam railroads. They were of unequal widths on the old California Street cable road. They performed exactly the same service and were just as effective in one case as in the other.

Much has been said in regard to the offset C, of the patent. The expert, Henry L. Brevoort, points out that the old California Street rail did not have this offset. The old California Street rail is in evidence and marked "Section California Street Rail." It was put in evidence while taking the deposition of said expert in New York.

The reason why the said offset was not applied to the California Street rail, as well as why it would not now be applied to that rail is very obvious when the California Street rail and the appellee's rail are placed side by side and their relative heights compared. The web of the California Street rail was a narrow one while the web of the appellee's rail is considerably wider. If the California Street rail had the offset put on it, it would have made both the fish plates very narrow. It was better to have one of the fish plates wider in order to have more strength of fish plates at each joint. In the appellee's rail the web is much wider and if the shoulder which is called the offset was not there it would require more width of fish plate to fill the space than was necessary to obtain the amount of strength required of the fish plates to do their work.

By standing the section of the appellee's rail in evidence beside the section of the California Street rail in evidence, it will be seen that the widths of the wide and narrow fish plates that were used on the two opposite sides of the California Street rail when added together amount to just about the same as the two equal widths of the appellee's fish plates amount to when they are added together. This shows that the mechanics who designed the respective rails

well knew the size and strength of the fish plates that would be required at each joint of the rails, and they also well knew how to shape the rails to obtain that size and strength notwithstanding that they used webs of different widths in the two sets of rails. *Ordinary rails had even fish plates on their opposite sides. The appellee followed this old ordinary style and placed the shoulders against which the edges of the fish plates were to bear in the same positions in which the corresponding shoulders had always been placed on ordinary steam railroads. The change from this usual location of such shoulders was made in the old California Street rails. The appellee in this respect only went back to the old method in locating these shoulders upon their rails.* (Evidence of Brevoort, Record, page 24.) By going back to this old method the change made in the form and location of the head necessarily left the so-called offset in its place. The form of head used by the appellee is confessedly not the patented form of head. If it was, the appellant would have claimed that other claims of the patent besides claim five were infringed.

As it was the common practice to make the distance between the foot and shoulders against which the edges of the fish plates bore of equal distances apart on both sides of the rails on all ordinary steam railroads, it, of course, required only the knowledge of ordinary rail makers to do the same thing for street rails and doing it could not involve any new invention. This patent therefore, well illustrates why the rule may be a just one which holds that a mere change of form involves only mechanical skill and does not include any patentable invention, as well also as the rule that such changes as make an improvement in degree only (which the change in this case did not even do) is not patentable.

It is claimed in this case that the appellee's rails infringe the fifth claim only of the patent. It is admitted that the appellee's rails do not infringe any of the remaining five claims of the patent. The specific changes made by the patentee, which are asserted to be the subjects of such other five claims, we will not stop to notice, as they are practically out of the case. The admission that the appellee does not infringe but one out of the six claims of the patent goes to some length in corroborating the testimony of Mr. Noble, the superintendent of the Rolling Mills, to the effect that the patented rail is an inferior rail and one that the appellee does not use and would not use.

### **Aggregation Instead of Combination.**

As there are a large number of cases decided by the Supreme Court in which the patents were held to be void upon the ground that they did not cover any patentable invention, and as many of those decisions held that what were called "*combinations*" in the patents were in fact but "*aggregations*" and for this reason they did not cover any patentable inventions, we will next present this sub-

ject of "aggregation" and then refer the Court to many in the long list of the decisions referred to, and which cover the general subject of want of invention.

Of the first twenty-nine decisions rendered by the Supreme Court after the beginning of the October term in October, 1889, in patent cases, more than one-half of the patents on which those suits were brought were decided to be invalid for the reason that they did not cover any patentable inventions.

We have not made an estimate as to the comparative number of patents that have since been declared void by the Supreme Court for the reason that they did not cover any patentable invention, but are well enough informed upon the subject to say that the Supreme Court has not changed its course of rulings in the matter. It has been deciding patents to be invalid upon the ground that they did not cover any patentable invention, right up to date. The last patent case that the Supreme Court decided, of which we have any knowledge, was decided on the fourteenth day of March, 1892, only about one month ago. The case was

*Ansonia Brass and Copper Co. vs. Electrical Supply Co.*, and is reported in Vol. 58 O. G., page 1692. In that case the Supreme Court held that the patent was void for want of patentable invention, and cited as references to support the decision several cases which we cite elsewhere in this brief.

See also,

*Consolidated Roller Mill Co. vs. Walker*, 138 U. S., 124.

*Union Edge Setter Co. vs. Keith*, 139 U. S., 530.

*McClain vs. Ortmyer*, 141 U. S., 419.

*Adams vs. Bellaire Stamping Co.*, 141 U. S., 539.

*Patent Clothing Co. vs. Glover*, 141 U. S., 560.

*Cluett vs. Claflin*, 140 U. S., 180.

From all this it is seen that there is a wide difference between the decisions of the Patent Office and the decisions of the Courts as to what constitutes patentable *inventions* as distinguished from the exercise of mere *mechanical skill* in the building of new structures.

In addition to our claim that the appellant's patent is void for the reason that it covers only a mere form of rail, we further attack its validity upon the ground that its combination of forms comprises only that kind of combination which is known in law as an "aggregation" instead of covering that kind of combinations which are recognized as patentable "combinations." There is a long list of decisions by the U. S. Supreme Court, as well as by other Courts, which holds that such combinations as constitute aggregations only, are not patentable. Aggregations which are not patentable, may be made by joining together mechanical devices in a machine in which the operation of each device is added to the operations of the other devices, so that the sum total constitutes only an addition of several

other end. The whole power of the mainspring is brought to bear upon every other one of the devices and the functions of the other devices are brought to bear upon the action of the power of the mainspring so as to restrain and control and regulate its action, as its power is being transmitted through them to the hands. The accurate movement of the hands is the ultimate result that flows from the mutual joint action of all the parts. Such action is not obtained by a mere adding together of the action which each device contributes, but it is obtained by blending the several action of each device with the several action of every other one of the devices. Not only does every one of the devices work at the same time that every other device is working, and not only do they all work together, but the action of every one of the devices *bears upon every other device and the action of every other device, every moment of the time that the machine is in operation;* and if the action of any one of the devices ceases, the action of *every* other device, either ceases altogether or is disarranged, and there is no longer the *same kind* of action performed by the remaining devices as a whole, or by anyone of the devices individually, as was performed by those remaining devices, as a whole, or by each of them individually, before the one device ceased its operation. If the mainspring was left unrestrained to run the hands alone, they would run their courses in a very few seconds, instead of being twenty-four hours in making their revolutions, and no time would be kept. It requires the balance wheel, escapement and hairspring acting together to regulate the proper movement as to speed. In order to connect the power of the mainspring with the hands so as to make them move just at the rate of motion required, other wheels are introduced into the mechanism to which the hands are attached. To tell the correct time, one of the hands must be made to run twelve times as fast as the other hand moves. This requirement calls for the introduction of other wheels. When the whole is completed, the ultimate result is the steady accurate movement of the hands. It is not the movement of the hands only, but it is their accurate regulated movement relatively to each other and to the passing time. Take out any one of the intermediate wheels, and although the whole power of the mainspring would remain, yet the ultimate result would be lost. As much power would remain in the machine as before and probably much more action, depending upon what wheel was removed. But the action would not be the same, nor of the same kind, for the reason that the influence of the omitted wheel would not be applied to it, and its quality would be changed, and the watch would not keep nor tell the time of day. One of the wheels being left out, the individual working of the other wheels would be changed. In the case of an aggregation, if one of the wheels is left out, each one of the remaining wheels will do its individual work the same as when all the wheels are in place, although the continuity might be so



broken, that the apparatus as a whole would not do its intended work, just as a single impassable place in a long bridge will prevent travel over the bridge, notwithstanding that all the remainder of the bridge is in good operative condition.

The case of *Burt vs. Evory*, 133 U. S. 349, was not decided until February 3rd, 1890. It has since been cited by the Supreme Court with approval, and as an authority, in the cases of *Busell Trimmer Co. vs. Stevens*, 137 U. S., on page 433; also in *French vs. Carter*, 137 U. S., on page 245; and also in *County of Fond Du Lac vs. May*, *ibid* page 407. It may, therefore, now be considered as a leading case in the present line of decisions. Regarding it as a leading case, it is not only very important, but it is interesting from the fact that the shoe which the patent covered is fully explained in the report and is easily understood. The shoes were made with a double extension gore upon each side of the shoe which readily extended to admit the foot, and which could then be folded forward over the instep and be secured by a buckle or knot or lacing. The specifications of the patent, in stating the general character of the invention and its advantages said, beginning on page 351: "Our said invention consists in a novel mode of constructing shoes and gaiters, whereby the ordinary elastic goring at the sides and the tedious lacing up at the front are both dispensed with, while at the same time the tops will expand to receive the foot, and fit neatly and closely around the ankle when the shoe is on, being also water tight to the extreme top of the shoe."

Special advantages were claimed in the specifications for the shoe in the following particulars, viz: "First, it requires less stock in its construction, and is therefore cheaper than those in which the gore is inserted in the heel; second, it is neater in appearance, and, being adjustable to the ankle, it may be fitted even where there is a variation in the size of the shoe, thus rendering it more available in the construction of shoes for sale at wholesale; third, it avoids the wrinkle in the heel in Babbit's construction of shoes, which, being exposed to the friction of the leg of the pantaloons, soon wears into a hole; fourth, by giving expansion forward to the vamp in front of the ankle, it admits of the more easy introduction of the foot, and allows a neater fit than is attainable when the gore is in the heel."

The description and claim of the patent are on pages 351, 352 and 353 of the report.

The Supreme Court, in rendering its decision, referred to those portions of the evidence which show the kind of shoes most like the patent which had been constructed when the patented improvement was made. *None of these references constitute an anticipation of the patent.* As the Supreme Court says on page 357: "Such was the state of the art when Evory and Heston made their application for the patent in suit."

This Court well understands the distinction between proving “*the state of the art*” to which the patented improvement belongs and proving an “*anticipation*” of such patented invention. An anticipation shows that the patented improvement was not new with the patentee, but that the *same thing* which is covered by the patent had been done before and was older than the patentee’s invention. Proof of an *anticipation* of the thing patented cannot be introduced unless due written notice, either by pleading the same in equity suits, or by setting the same up in the answer, or otherwise giving written notice thereof in suits at law, has been given by the defendant to the plaintiff.

On the other hand, proof of the “*state of the art*” is given without pleading the same or giving any notice thereof. The state of the art is shown when there has been no actual anticipation of the *identical thing patented*. It is given for the purpose of showing the extent of the invention which is covered by the patent. The extent of the patentee’s invention which is covered by the patent, is proved for the purpose of showing to what extent the patentee has discovered and introduced a *new principle or mode of operation*.

If what the defendant in a patent suit makes is precisely the *same thing* thing that is covered by the patent, the infringement is manifest and there is no need of proving the state of the art for the purpose of showing the infringement. But in most cases, what the defendant makes is not the same thing as that described in the patent. If, however, the patentee has made an original invention, in which he has constructed, say for instance, a *machine* that is different from any other machine that was ever made, as, for example, Howes’ sewing machine, or the first reaping machine, or the first telephone, the invention must not only have been of the machine that is constructed, but it must also have included the *first and original discovery of the principle or mode of operation of that machine*. Unless such patentee of a first original machine had *first* conceived the idea that a machine could be made involving such mode of operation, he could never have made the machine. In such case an infringement occurs whenever a second party constructs a machine that operates upon the same general principle and mode of operation, producing the same kind of results as does the patented machine.

Unless such inventor had first conceived the idea of the general principles and mode of operation of the machine, he could never have commenced its construction. Doubtless many machines will be made in the future of great utility and value, that have never yet been thought of. Such machines would have been made long before this time, if any one had ever thought of them. The person who first thinks of one of them, who *first* conceives of their *general nature and construction, and mode of operation*, will be an original discover of an original principle. The *soul* of the machine will be of

his begetting, as well as the construction of it. To illustrate the importance of such *first* conception, let us take the case of the sewing machine. The world had been moving for six thousand years and was filled with mechanics and machinery, when Howe first thought of the possibility of a sewing machine. We have no reason to suppose that any other man had ever conceived the idea of such a possibility before. Howe, in this original conception, stood *solitary and alone*. Of all the numberless millions that had lived and died before his time, and all those millions that were living at his time, not one had thought of the possibility of a sewing machine, and not one would have constructed a sewing machine. As soon as Howe made one machine, and the conception which first had its origin in his brain, had resulted in the making of a sewing machine and had thus *dragged from the darkness of chaos, one of its secrets and blazoned it forth in the form of actual knowledge* to the world and to the great advantage of its inhabitants, there at once arose an army of imitators and improvers. Once that the original conception had taken place, thousands of imitators could follow and make additions and improvements, but *not one of those imitators would ever have made the original*. They could erect new forms of structures upon the foundation which Howe had built, but *not one of them could have built the foundation*. The foundation was Howe's, and being his, no other one could ever own it. As from its nature, there never could be but the one foundation, and as that belonged to Howe, no other man could ever legally own that foundation, and not owning it, he would have no right to reach out and cover it by asserting that it was the mechanical equivalent of the foundation that he had put in his subsequent improved sewing machine. The Courts should not forget that the foundation of the subsequent machine was Howe's, and did not belong to the party making this subsequent improved machine. The foundation was Howe's, and could not belong to any of the subsequent parties using it. Except for that one single inventor, Howe, there probably would not be a single sewing machine in existence to-day. He was the father, the progenitor of the whole family of sewing machines, and without a first parent, the family would never have been. The distinction between the discoverer of the original principle of the first machine and the limited inventions of improvers of things already in existence, can never be lost sight of by the Courts without running riot in rendering unjust decisions. The Supreme Court, in its decisions, keeps this distinction steadily in view. The application of this distinction is, in part and as far as it goes, the application of "*the state of the art.*"

Suppose after such first original machine is constructed, a second inventor who never did and never would have thought of building such machine, comes along and sees it.

In seeing the machine operate, he discovers that by changing some parts or adding another element, he can make the machine

do more work than it did before. He makes the improvement and takes out his patent for it, and in such patent claims his improved machine. It is easy to see in such case, that while the second inventor makes a better machine than did the first inventor, he nevertheless would not be entitled to reach out and cover as infringements of his patent for an improved machine, the method and mode of operation which was contained in the first machine; because such method and mode of operation was not only not invented or discovered by him, but he had found it ready made and put in practice by the first inventor who already had a patent that covered it. One of the principal objects of proving the state of the art, is to ascertain just what the patentee has invented, and to allow his to cover mechanical equivalents to the extent that he has introduced any new mode of operation. We will refer to this subject and cite authorities pertinent thereto later.

We refer to this state of the art here for the purpose of impressing upon the mind of the Court, the fact that in the case of *Burt vs. Evory*, the Supreme Court did not decide that the patented improvement had been anticipated. On the contrary, on page 358, the Court says in reference to the patented shoe:

“In the construction of it the vamp, the quarters and the expandible gore flap were cut somewhat *differently, it is true, from like parts of the shoes constructed under the earlier patents referred to, but they subserved the same purposes.*”

This quotation shows that the Supreme Court believed, admitted and held that the improvement which was covered by the patent in the case was in fact new. On the first part of the same page 358, the Supreme Court says:

“It is difficult to see any patentable device or function in the Evory and Heston shoe. It is a mere *aggregation* of old parts, with only such changes of form or arrangement as a skillful mechanic could readily devise, the natural outgrowth of the development of mechanical skill, as distinguished from invention. The changes made by Evory and Heston in the construction of a water tight shoe, were changes of degree only, and *did not involve any new principle.*”

“Their shoe performed no new function. \* \* \* \* It is well settled that not every improvement in an article is patentable. The test is that the improvement must be the product of an original conception. *Pearce v. Mulford*, 102, U. S. 112, 118; *Slawson v. Grand Street Railroad*, 107, U. S. 649; *Munson v. New York City*, 124 U. S. 601 and many other cases. And a mere carrying forward or more extended application of an original idea—a mere improvement in degree—is not invention,” etc.

This case declares that although the different parts which went to make up the shoe, were all combined in one shoe, *yet it was a mere aggregation* of old parts. The appellant and the appellant's

counsel, according to their argument in this case, would have taken the opposite ground and insisted that the shoe constituted a patentable combination of parts. The parts in the shoe which the Supreme Court held to be an aggregation only, were certainly combined together and acted together and each one operated and did its part towards the attainment of one common result, which was an *improved* water tight shoe. Not one of those parts could have been omitted without injury or absolutely destroying the usefulness of the action of the other parts, just as removing one length of a fence destroys the utility of all that remains. Yet each part only performed its own action. The parts were added together and the shoe was made up by the contribution of several different parts, where each part performed its own function only and did not help or assist any other part to perform its function. The action of each several part was its own action only. There was none of that kind of joint action in which the action of each part controlled or affected the action of each and every one of the other parts.

This case of *Burt vs. Ivory*, was cited by the Supreme Court, in the case of *Florsheim vs. Schilling*, in which an action was brought for an infringement of two patents for improvements in corsets, 137 U. S., page 77. On the page last mentioned, the Supreme Court repeats the rule which it before had stated in *Pickering vs. McCullough*, 104 U. S. 310, 318, as to what constitutes a patentable combination. It says:

“In a patentable combination of old elements, *all the constituents must so enter into it as that each qualifies every other.* \* \* \* It must form either a new machine of a distinct character and function, or *produce a result due to the joint and co-operating action of all the elements*, and which is not the mere adding together of separate contributions. *The combination of old devices into a new article, without producing any new mode of operation, is not invention.’*”

The Court then cites ten of its own prior decisions to sustain the position announced. It will be noticed that the foregoing rule *states the distinction* between a combination that is patentable and the mere adding together of separate combinations, which is unpatentable because it constitutes only an aggregation. The rule itself is simple and easy as a rule. It is not always, however, so easy to apply the rule to any given case, as it is to know what the rule is. In many cases, the nature of the combination in the apparatus comes so closely to the line between the two classes of combination, that two Courts of equally good judgment might not be agreed as to which clause of the rule covered the combination found. While the rule is simple, its application may often be doubtful and difficult.

Both of the patents in the said case of *Florsheim vs. Schilling*, were declared invalid.

The following is one of the cases decided by the Supreme Court in which the law of aggregations has been applied *where the devices*

acted in the same machine, but yet were held not to constitute a patentable invention. The case is not anything like the pencil case where there was a rubber upon one end of the pencil which might be used to rub out the mark which was made by the pencil lead at the other end, since in that implement all of the elements were not in use at the same time. The citation which we make applies to a machine in which *all of the elements acted together and at the same time*, but yet were held by the Supreme Court to be an unpatentable aggregation only and not a patentable combination.

In *Royer vs. Roth*, 132 U. S. 201, the patent was for a combination of automatic shifting device with a rawhide fulling machine. In using the machine it was necessary to reverse its motion so as to make it revolve awhile in one direction and then change and revolve awhile in an opposite direction. The machine without the automatic reverser had already been patented and it had been used extensively, reversing it by hand. Joining an automatic reverser to it was a great improvement and made the machine as a whole very much more valuable. The machine controlled the action of the reverser and the reverser in turn controlled the action of the machine. It looked to us like a combination as distinguished from an aggregation. But the Supreme Court decided that "it is a mere aggregation of parts." See 132, U. S. on page 206.

Surely if joining the shifting device to the rawhide machine so that each worked with and controlled the action of the other was only an "aggregation of parts," the adding of the *ordinary* web and foot of a T-rail under the rail head and flange instead of placing the timbers thereunder, as shown in Figure 3, of the patent, was only making an aggregation, and not a patentable combination.

In the case of *Watson vs. Cincinnati Railway Co.*, 132 U. S., 161, the patent was for a yielding grain door in combination with other devices. We do not recite the claims at length, as they are quite lengthy. The Supreme Court held that giving the plaintiff the construction which he was claiming for the patent that it could not be upheld, for the reason that "it does not involve invention, but *consists in a mere aggregation of parts*, each to perform its separate and independent function substantially in the same manner *as before combination* with the other, and without contributing to a *new and combined result.*" The Court further says on the same page—167—"The substitution of the old flexible sliding inside door, reduced in size to correspond with the old inside rigid grain door, *may have required some mechanical skill*, and *may have been new and useful*, but it did not involve the exertion of the inventive faculty, and embraced nothing that was patentable."

Here was admittedly a *new combination* of parts *that was new and useful*. Yet it was not a patentable combination, because *it did not involve invention*, according to the Supreme Court. It is to be observed that the Supreme Court does not hold that those things are

not “*combinations.*” It only holds that they do not involve patentable invention and for this reason they are not patentable.

This question of aggregation, and want of invention to a certain extent, go together. Whatever is an aggregation merely, is always unpatentable, and it is unpatentable because it lacks invention. Other things, however, besides aggregation are patented which also lack invention, but such patents are, of course, also void.

In the case of *Dunbar vs. Myers*, 94 U. S., 187. The patent was the combination of *two* deflecting plates placed at the sides of a circular saw for the purpose of preventing the sawed stuff from bearing against the sides of the saw and expanding the saw kerf, and also for stiffening thin veneer saws. The description of the two deflecting plates are on page 189; they are not precisely alike, but nearly so. Similar machines, with one deflecting plate one side of the saw, had been known and were in use for several years.

The first assignment of error was that the lower Court “erred in holding that there was invention in using *two* deflecting plates “when the use of one was well known.” (See the case at page 192.)

The Supreme Court held that where one plate had been used on one side of the saw that it required no invention, and did not involve invention to put another plate of nearly the same kind, performing substantially the same purposes, upon the opposite side. Beginning on page 195, the Court says as follows:

“Grant that two such plates are in certain cases better than one used alone, still the question arises whether it involves any invention to add the second plate to a machine already constructed with one plate. Beyond doubt, every operator who had used a machine having one deflecting plate knew full well what the function was that the deflecting plate was designed to accomplish, and the reasons for placing it at the side of the saw are obvious to the understanding of every one who ever witnessed the operation of the circular saw. Ordinary mechanics know how to use bolts, rivets and screws, and it is obvious that any one knowing how to use such devices would know how to arrange a deflecting plate at one side of a circular saw which had such a device properly arranged on the other side, it being conceded that both deflecting plates are *constructed and arranged precisely alike, except that one is placed on one side of the saw and the other on the opposite side.* Both are attached to the frame in the same manner; nor is it shown either in the specification or drawings that there is anything peculiar in the means employed for arranging the deflecting plates at the sides of the saw, or in attaching the same to the frame. Both are alike, except that the outer end of the one on the same side as the strengthening plate projects farther from the saw than the inner end and that the other is rather smaller in diameter, and that the ends project about an equal distance from the saw.”

The Court then cites many cases illustrating what is a lack of patentable invention. On pages 198 and 199 the Court throws in a statement with regard to proof of the state of the art and what it is admitted to show.

On page 200 the Court further says:

“For these reasons, we are all of the opinion that the claim of the improvement described as the employment or use of two deflecting plates, one placed on each side of the circular saw, for the purposes set forth in the specification, is void, *because it does not constitute a patentable invention.*”

This case of *Dunbar vs. Myers* has been repeatedly mentioned with approval by the Supreme Court in subsequent cases, and it is cited as an authority upon the point as to what does and what does not constitute patentable inventions. in *Roemer vs. Simon*, 95 U. S., 218; *Stawson vs. Grand St. R. R. Co.*, 107 U. S., 653; *Mahn vs. Harwood*, 112 U. S., 358; and in *Morris vs. McMillin*, 112, U. S. 249.

In *Dunbar vs. Myers*, there was *mechanical action* in the elements covered by the combination, while in the appellant's rail there is *no action whatever*. There was more reason for holding the combination patentable in *Dunbar vs. Myers* than there is in the present case for holding the rail patentable, for the reasons that in the former the devices were mechanical operating devices which worked simultaneously and together and produced *one general result*, that of sawing lumber. While in the appellant's rail, the elements, *i. e.*, the various forms and location of the parts which make up the rail have *no mechanical action whatever, do not operate together, nor do they operate to produce one general result even.*

The case cited of *Dunbar vs. Myers* covers, perhaps, a case of mere *duplication* more than it does of *aggregation*. Still this duplication was strictly an *aggregation* and the case is in point both an account of the general principles presented in it and as showing that making the two shoulders on the opposite side of the web, against which the upper edges of the fish plates would bear, of the same height constituted, only a *duplication* and no invention.

The following are some of the further authorities upon *aggregation*:

*Hendy vs. Miners' Iron Works*, 127 U. S., 370, was a case originally tried in the Circuit Court in California and decided for the defendant. The complainant appealed from the decision and the Supreme Court affirmed the decision. The patent was for an improvement in ore-stamp feeders. The first claim of the patent, which was the one asserted to be infringed, was as follows:

“The feeding cylinder, I, mounted upon the movable timbers, H H, substantially as and for the purpose above described.”

The Supreme Court held that the union of the parts in the machine was merely an *aggregation*. On page 375, the Court



says:

“Moreover, there is *no patentable combination* between the rollers which make the timbers movable and the feeding cylinder I, mounted upon the timbers. *The union of parts is merely an aggregation.* The feeding cylinder, mounted upon timbers which have rollers, *operates no differently from what it does when mounted upon timbers which have no rollers.* *Hailes v. Van Wormer*, 20 Wall., 353, 368; *Reckendorfer v. Faber*, 92 U. S., 347, 357; *Pickering v. McCullough*, 104 U. S. 310, 318; *Bussey v. Excelsior Mfg Co.* 110 U. S., 131, 146. There is nothing patentable in the aggregation.”

In *Beecher Mfg Co. vs. Atwater Mfg Co.* 114 U. S., page 523, is another decision to the same effect. The patent in that case was for an improvement in dies for forming the clip arms for king bolts for wagons. These bolts were made “by taking an iron rod of suitable length, splitting it for about two inches at one end and turning the forks or arms outwards; then heating the rod, placing the body in a hole in a block or die grooved to receive the arms, and striking it with a plane-faced upper die so as to force the arms into and make them take the shape of the grooves, and afterwards placing it between two other dies which give the arms the proper bend to fit them to the axle-tree of a wagon.”

The Court says, page 524, that the claim “for the use in succession, or, in the patentee’s phrase, ‘the series’ of the two pairs of old dies, the one pair to shape the arms of the bolt, and the other to give those arms the requisite curve, does not show any patentable invention. *The two pairs of dies were not combined in one machine, and do not co-operate to one result.* Each pair was used by itself, and might be so used at any distance of time or place from the other; and *if the two were used at the same place and in immediate succession of time the result of the action of each was separate and distinct, and was in no way influenced or affected by the action of the other.* This was no combination that would sustain a patent.”

In Walker on Patents, Section 32, this rule is repeated, that an *aggregation is not invention*,” and cases are cited which sustain the proposition and illustrate it by showing many devices which act simultaneously or in juxtaposition with each other, and assist in doing one general piece of work, but which are decided to be only aggregations and not patentable as combinations.

*Reckendorfer vs. Faber*, 92 U. S., 347, is a leading case upon this point, and has been repeatedly cited by the Supreme Court, as well as by other Courts, as laying down the proper rule. Many cases are cited in that decision on pages 352, 353 and 354. In that case the Court says, on page 357:

“The combination, to be patentable must produce a different force or effect, or result in the combined forces or processes, from that given by their separate parts. There must be a *new result produced by their union; if not so, it is only an aggregation of separate*

“ *elements.*”

In this case the claim was for “The combination of the lead and India rubber or other erasing substance, in the holder of a drawing pencil.”

The Court held that merely using one rod for both the pencil and rubber only amounted to an aggregation, and that it was not a patentable combination of devices.

In this case, however, it is so obvious that the pencil and rubber did not co-operate together to do the same work; that it does not furnish much of a test as to what, in close cases, would distinguish a patentable combination from an aggregation. The value of the case as an authority consists in the rule above quoted from it, declaring *what a combination must produce in order to be patentable.* The rule, however, was not new with the decision cited. In Section 50 of Curtis on Patents, he says :

“The question will arise, then, in reference to any supposed invention, in what is the novelty to consist, or, in other words, what is the nature of the change that has been effected which will entitle it to the protection of a patent? *It is a leading general principle on this subject, as we have already seen, that there must be something more than a change of form, or of the juxtaposition of parts, or of the external relation of things, or of the order or arrangement in which things are used. The change, or the new combination or relations, must introduce or embody some new mode of operation, or accomplish some effect not before produced.*”

Apply to the two shoulders for the fish plates, one of which is called the offset, C, on opposite sides of the web at equal heights, the language of the Supreme Court in *Pickering vs. McCullough*, in 104 U. S., on page 318, that “in a patentable combination of old elements all the constituents must so enter into it as that each qualifies every other; to draw an illustration from another branch of the law, they must be joint tenants of the domain of the invention, seized each of every part, *per my et per tout*, and not mere tenants in common, with separate interests and estates. It must form either a new machine of a distinct character and function, or produce a result due to the joint and co-operating action of all the elements, and which *is not the mere adding together of separate contributions.* Otherwise, it is only a mechanical juxtaposition, and not a vital union,” and every appearance of patentable invention disappears.

What is there, we ask appellant’s counsel and the Court, in one of the shoulders that qualifies the action of the other shoulder on the opposite side of the web except the furnishing of means by which the two opposite fish plates, which are themselves but separate contributions, can be made of equal widths. While the fish plates act together they still only act separately. Take away either and the remaining one will do its work just the same. The two of them fur-

nish twice as much strength as one would alone. They do this only because they are duplicated, and being of the same size and strength, two of them are twice as strong as one alone would be. If there is no joint action between the two fish plates except such as results from adding together what each one separately does, surely there can be no joint action between the two separate upper shoulders against which each one of the respective separate fish plates respectively and separately bears.

As a further authority and illustration of what will not constitute a patentable combination, we cite the case of *Bussey vs. Excelsior M'fg Co.*, 110 U. S. 131; and the facts of the case, so far as they apply to the third patent in that suit. They are very instructive. The three patents sued upon in that case were all for improvements in cooking stoves. The third patent was No. 142,934; and the Court commences the discussion of that patent near the bottom of page 142. In that patent the stove had an oven, A, in its middle part a fire box, I, in its front part, and a damper H, by means of which the draft could be changed so as to run through different sets of flues, either over or around the oven as might be desired, and then pass through what was called the base "pan," or "flue shell " D," into and through the exit flue. Whatever other flues the draft passed through around the oven, it must pass through the base pan or flue shell D, and from there through the final exit flue. The base pan is shown in figure 4, on page 143. It is a pan with hooks and devices, by which it is readily attached to and detached from the back of the stove. The bottom of this base pan, when attached to the stove, formed the top of what was called a warming closet, G, which was placed at the back of the stove and underneath the base pan. There were two different devices which served at different times, as might be described, as the top of the base pan, one was the cover, K, shown in figure 3, with two ordinary boiler holes, and another hole for the attachment of an exit flue. This cover might be used if desired. There was connected with the stove a portable reservoir, F, having upon its back part a section of an exit flue marked E. This reservoir, F, is shown in figure 1, page 143, as furnishing the top for the base pan, D, in the stead of the cover before mentioned. When the reservoir, F, was so used the cover mentioned was not used, and the exit pipe, E, came into place so as to allow the draft to pass from the stove through the base pan or flue shell, D, and so on through the exit flue, E, which made a part of the portable reservoir, F.

(This case is in *Brodix American and English Patent Cases*, Vol. 15, pages 77 to 99 and cuts of this stove, with the different parts are shown on page 95.)

There were three claims to the patent. The Court held that in view of the state of the art there was no invention in the first claim of the patent which was for the means used to attach the

base pan to the back of the stove.

Claim 2 was for a combination of the reservoir, F, with the flue, E, at its rear side, with the portable base pan or flue shell, D, and the Supreme Court held that this claim 2 "is merely for an aggregation of parts, and not for a patentable combination."

Claim 3 of the patent was for a combination with a three-flue stove, having a damper, H, arranged as described, of the portable base pan or flue shell, D, and warming closet, G.

This claim also the Supreme Court held to be an aggregation and not a patentable combination. See the decision on first half of page 146, where the Court says:

"Claim 2 is merely for an aggregation of parts, and not for a patentable combination, there being no patentable relation between a portable reservoir with a flue in its rear side and the existence or portability of a base pan beneath it. In claim 3 there is merely an aggregation of parts, there being no patentable relation between a damper for the middle flue of a three-flue stove, and the existence or portability of a base pan or the existence of a warming closet."

Yet the Court will notice that these devices in the stove were joined together, and so joined that the bottom of the portable reservoir formed the top of the base pan, and the heated draft passing through the base pan heated the water in the reservoir. Also, that the bottom of the base pan formed the top of the warming closet, which was warmed by the draft passing through the base pan, and the damper was used to throw the draft through the different sets of flues around the oven before it reached the base pan, which was, in fact, an extension of the flues. If, in cases like this, where the parts are not only joined together, but were the base pan was used for heating both the reservoir and the warming closet, are held by the Supreme Court to be only an unpatentable aggregation, how can it be held that the appellant's T-rail with its aggregation of forms, as covered by Claim 5, is anything more than an unpatentable aggregation, since neither of those forms helps either one of the others to do its work.

In the case of the stove patent, just referred to, it was doubtless the fact that the base pan, D, did have an effect on the reservoir, F, and also on the warming closet, G, because it warmed both of them, but neither of them had any effect on the base pan, D. The draft would pass through the base pan D, just the same whether the reservoir, F, or warming closet, G, was there or not.

The case of *Adams vs. Bellaire Stamping Co.*, 141 U. S., 539, contains facts and law that will illustrate the doctrine of aggregations.

We think we have sufficiently illustrated what the rule is between that kind of combination which is defined by the Supreme

Court as an "aggregation" and which is not patentable and that other kind of a combination that is patentable, and which requires that every device in the combination, shall not only co-act with, but shall also affect the action of every other device in the combination, so that there is a new kind of action made up by the intermingling, uniting and blending into one new action, all of the several actions of all of the several devices and which action produced by such intermingling, uniting and blending, is different from any action that would be produced by the mere adding together of the several actions of the several devices, just as the separated colors of the rainbow are shown in seven bright and distinct shades, when they are joined together at their edges, or in other words, are added one to another, each one of the colors showing its own action in making up the gorgeous arch resplendent in its seven separate colors, represent an aggregation of colors, while those same colors, when they are mingled into one homogenous indivisible whole, and show but the white sunlight which is different from several colors added together, represents the new form of joint action which is different from the addition of several separate actions.

We think also that we have cited examples of the application of the rule sufficiently to show that in this particular case the patented rail is made up simply by adding special forms of the different parts together, and that there is no joint action between the different parts of the rail, or between the special forms of such different parts any more than there was a joint action between the several parts of the Ivory and Heston shoe. The foot of the appellant's rail acts as the foot of the rail only; the web of the rail is an addition to the foot and it acts as a web only; the head and shoulders of the rail for making even fish plating are additions made to the web and foot of the rail, and they act just as the head and shoulders for even fish plating have always acted on ordinary T rails; the flange upon the opposite side from the head is an addition made to the other parts, and acts just as the flanges on ordinary tram rails as well as those on the old California street girder rails acted. The head and web and foot of the rail would perform their duties if the flange was not there, just exactly in the same manner as they perform their duties when the flange is there. The head and flange of the rail perform their duties when resting on and supported by the web and foot of the rail just exactly the same as they perform their duties in the old tram rails when resting upon and supported by the wooden stringers as shown in figure 3 of the patent, and the web and foot perform their duties just exactly the same as the same kinds of webs and feet had been performing similar duties in the ordinary rails of ordinary steam roads for about two generations past. We can safely challenge the appellant's counsel to point out any action or duty performed by the foot

and web of the patented rail that is any ways different from the similar duties that they performed in the ordinary T-rail. If such foot and web perform no duties in the patented rail which they did not perform in the ordinary T-rail, of course there can be no joint action between such foot and web of the patented rail with the flange of the patented rail since there was no such flange on the ordinary T rails; and if there was a new joint action between the foot, web and flange of the patented rail, then such foot and web must do something different in the patented rail from what they did in the prior T rail. In the following list of cases the patents were decided to be invalid, some for one reason and some for another. It would extend this brief to an impracticable length to analyze and discuss the whole of such cases in detail, and we think we have analyzed as many of the cases as is necessary. The Court of course can consult as many of the said list of cases as it desires, and in them will find a confirmation of the rules of decision which we have already presented.

*Hailes vs. Van Wormer*, 20 Wall., 353-375.

*Reckendorfer vs. Faber*, 92 U. S., 347-358.

*Pickering vs. McCulloch*, 104 U. S., 310-319.

*Bussey vs. Excelsior Manufacturing Co.*, 110 U. S., 131, 146.

*Tack Co. vs. Two Rivers Manufacturing Co.*, 109 U. S., 117.

*Phillips vs. City of Detroit*, 111 U. S. 604.

*Stephenson vs. Brooklyn Railroad Company*, 114 U. S., 149.

*Beecher Manufacturing Co. vs. Atwater Manufacturing Co.*, 114 U. S., 523.

*Heating Co. vs. Burtis*, 121 U. S., 286.

*Thompson vs. Boisselier*, 114 U. S., 1, 12.

*Atlantic Works vs. Brady*, 107 U. S., 192, 200.

*Yale Lock Man. Co. vs. Greenleaf*, 117 U. S., 554, 559.

*Pomace Holder Co. vs. Ferguson*, 119 U. S., 335, 338.

*Pearce vs. Mulford*, 102 U. S., 112, 118.

*Slawson vs. Grand Street Railroad*, 107 U. S., 649.

*Munson vs. New York City*, 124 U. S., 601.

*Hall vs. McNeale*, 107 U. S., 90.

*Gardner vs. Herz*, 118 U. S., 180.

*Holland vs. Shipley*, 127 U. S., 396.

*Pattee Plow Co. vs. Kingman*, 129 U. S., 294.

*Brown vs. District of Columbia*, 130 U. S., 87.

*Day vs. Fairhaven and Westville Railway Co.*, 132 U. S., 98.

*Watson vs. Cincinnati &c., Railway Co.*, 132 U. S., 161.

*Marchand vs. Emken*, 132 U. S., 195.

*Hill vs. Wooster*, 132 U. S., 693.

*French vs. Carter*, 137 U. S., 239.

*County of Fon du Lac vs. May*, 137 U. S., 395.

*May vs. County of Juneau*, 137 U. S., 408.

*Busell Trimmer Co. vs. Stevens*, 137 U. S., 423.

Some latter cases we have cited further back in this brief.

In the case of *St. Germain vs. Brunswick*, 135 U. S., 227, the Supreme Court held that the patent did not cover any patentable invention. The case was appealed from the California Circuit Court.

Brunswick was the owner of the patent and was the complainant in the lower Court. The interlocutory decree, sustaining the patent and granting the injunction, was rendered by his Honor, Judge Sabin. After an accounting had been had the case again came up on final hearing before his Honor, Judge Sawyer, and the original interlocutory decree was made final. The defendant, St. Germain appealed.

The patent was on a revolving cue rack. Before the alleged invention, cue racks had been made stationary. The patentee conceived the idea that they would be better if they were made to revolve, and he accordingly made them that way, and took out his patent for the revolving cue rack.

The state of the art showed that table castors and table tops had been made revolving and were used to bring around dishes and decanters in substantially the same way that the revolving cue racks was used to bring around the cues when it revolved. The Supreme Court held that in view of the state of the art, it only required mechanical skill to make the cue rack revolving, and that the patent was void.

It will be noticed in the foregoing case that the patent was not anticipated. The patentee was the first to make cue racks revolving. But as it was a well-known method of constructing other machines whose general purpose was the same, that of bringing around within easy reach the various articles placed thereon, it required no invention to construct billiard cue racks upon this well-known method. The case is instructive, not only as showing a distinction between invention and the application of mechanical skill in the construction of new things, but it is a valuable case as showing an application of *the state of the art for the purpose of ascertaining whether the thing which is new and covered by the patent constitutes a patentable invention or not*. The revolving cue rack was new and it was covered by the patent. Still because it was known how to make other things revolving and perform the same general kind of services, that of bringing around within easy reach the articles placed upon them it did not involve invention to so form cue racks that *they* would hold the

ences and bring them around within easy reach in the same general way.

In order to be perfectly fair with the Court in discussing this question we will present the prominent cases decided in which the Supreme Court has held that the patents did cover patentable inventions, and thus point out in that line of decisions the rules by which patentable inventions are to be distinguished from those changes and improvements which are not patentable.

The fundamental rules are stated in the two following cases next cited. In the case of *McCormick vs. Talcott*, 20 Howard (in which the patent was on a divider on a reaping machine), on page 405, the Supreme Court says:

“ *If he be the original inventor of the device or machine, called the divider, he will have a right to treat as infringers all who make dividers operating on the same principle, and performing the same functions by analagous means or equivalent combinations, even though the infringing machine may be an improvement of the original, and patentable as such. But if the invention claimed be itself but an improvement on a known machine by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original machine by use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first.*”

We ask the Court to notice the distinction in the foregoing quotation between the first *inventor* of the device and the first *improver* of the device *after the first inventor has created it*. The first inventor is the creator of the machine and he may invoke the doctrine of mechanical equivalents of the entire machine and all parts of it when used in the machine. This is because his invention was of the whole machine and all its parts as used in the machine. The first improver on the machine could do no more than make some change in what he already saw. His invention must of necessity be a very limited one unless he could make a change that would give the machine or some part of it a new mode of operation. We are not, however, speaking of such changes but only of those changes which are of no benefit (and such changes probably comprise three-fourths of all the so-called inventions for which patents are granted) or which improve the machine without creating any new mode of operation but are among some of the classes which are shown in the Supreme Court decisions that we have referred to where the patents have been held to be entirely void, or are given a narrow construction that prevented them from covering mechanical equivalents. The first *improver's* invention must be of a change in what already existed. The subsequent improvers may make changes of still less importance and some of them are pretty sure to be changes for the



worse. Such is very often the case in practice. It is also very often the case in practice that those patentees who have done nothing but make a change for the worse are the very one that insist most strongly, that their patents should be broadly construed, so as to cover the principle of operation of the entire machine to which their change applies. They are obliged to so insist for the reason that, their change being only for the worse, *no one will use it*, and their patents for such changes *can only be made valuable by swinging it over some other improvement which they did not make*. They therefore attempt to swing their worthless patent away from the worse than worthless change which they have made and patented as an invention, by the application of the doctrine of mechanical equivalents. The injustice of permitting this to be done is apparent.

Is not the present case a fair illustration of one of the cases last mentioned. The change made in rails by the patentee is a change that so far as the evidence shows *no one uses*. This is a fact which shows that it was a change for the worse. The appellant asserts an infringement of the fifth claim only. The fifth claim by its terms covers the combined tram and T-rail *only when the web, E, is located relatively to the flange, A, and head, B, as described in the patent, which is with the head entirely to the left of a vertical line rising from the web*. The appellee's rail *does not have the web located relatively to the flange and head as described in the patent*. But the appellant's counsel say that while this is true the location in appellee's rail is an equivalent one and therefore it is substantially, the same location. In saying this, the appellant ignores the fact that *his "invention" in respect to such location consists entirely in making a change of this relative location so as to have the web at one side of the head, in old rails in which the said relative location of the web head and the flange were exactly the same as in the appellee's rails*. In the appellee's rails the relative location of the web head and flange are *exactly the same as they were in the old California Street rail*, that is, with the head directly over the web and the flange to the right of the web. If the relative location of the web, head and flange when the head is directly over the web is the equivalent of the relative location of the parts when the head is to the left of the web, the result follows that the change made in this respect by the patentee was only substituting his new relative location of the parts, which substitution was the equivalent of the relative location of the parts as they were already in use.

In this way the appellant is seeking to make the *old* "relative location" of the parts, an infringement of his *new* "relative location" of the same parts. This is nearly the same thing that was attempted in the case of *McCormick vs. Talcott*. In that case on page 407, the Supreme Court says in regard to such attempt: "This attempt to treat the earlier and better device used by defendant as an infringement of a later device to obviate a difficulty unknown

“ to the first, is an application of the doctrine of equivalents which  
“ needs no further comment.”

The last case cited, *McCormick vs. Talcott*, was decided as early as 1857; over thirty-four years ago.

The next case we refer to which contains a restatement of the same rule of law with regard to the distinction between original inventors and improvers is that of the *Railway Co. vs. Sayles*, 97 U. S., pp. 556, 557, where the Supreme Court says:

“ In such cases, if one inventor precedes all the rest, and strikes  
“ out something which includes and underlies all that they produce,  
“ he acquires a monopoly, and subjects them to tribute. But if the  
“ advance towards the thing desired is gradual, and proceeds step by  
“ step, so that no one can claim the complete whole, then each is en-  
“ titled only to the specific form of device which he produces, and  
“ every other inventor is entitled to his own specific form, so long as  
“ it differs from those of his competitors, and does not include theirs  
“ These general principles are so obvious, that they need no argument  
“ or illustration to support them.”

We now cite other cases, in which the inventions were upheld by the Supreme Court, of comparatively recent dates, and in those decisions appear the reasons why the inventions were held to be patentable and why they deserved the full protection of the law and Courts.

In the cases of *Morley Machine Co. vs. Lancaster* 129, U. S., page 263; on page 273 the Court says:

“ Morley having been the first person who succeeded in producing  
“ an automatic machine for sewing buttons of the kind in question  
“ upon fabrics, is entitled to a liberal construction of the claims  
“ of his patent. He was not a mere improver upon a prior machine  
“ which was capable of accomplishing the same general result, in  
“ which case, his claims would properly receive a narrower inter-  
“ pretation. This principle is well settled in the patent law, both in  
“ this country and in England. Where an invention is one of a pri-  
“ mary character, and the mechanical functions performed by the  
“ machine are, as a whole, entirely new, all subsequent machines  
“ which employ substantially the same means to accomplish the  
“ same result are infringements, although the subsequent machine  
“ may contain improvements in the separate mechanisms which go  
“ to make up the machine.

“ In *McCormick v. Talcott*, 20 How., 402, 405, the inquiry was  
“ whether McCormick was the first person who invented, in a reap-  
“ ing machine, the apparatus called a divider, performing the re-  
“ quired functions, or whether he had merely improved an existing  
“ apparatus, by a combination of mechanical devices, which per-  
“ formed the same functions, in a better manner. This Court,  
“ speaking by Mr. Justice Grier, said: ‘ If he (the patentee) be the  
“ ‘original inventor of the device or machine called the divider, he

“ ‘will have a right to treat as infringers all who make dividers  
 “ ‘operating on the same principle, and performing the same func-  
 “ ‘tions by analogous means or equivalent combinations, even though  
 “ ‘the infringing machine may be an improvement of the original,  
 “ ‘and patentable as such. But if the invention claimed be itself  
 “ ‘but an improvement on a known machine by a mere change of  
 “ ‘form or combination of parts, the patentee cannot treat another  
 “ ‘as an infringer who has improved the original machine by use of  
 “ ‘a different form or combination, performing the same functions.  
 “ ‘The inventor of the first improvement cannot invoke the doctrine  
 “ ‘of equivalents to suppress all other improvements which are not  
 “ ‘mere colorable invasions of the first.’

“ So, also, in *Railway Co. v. Sayles*, 97 U. S., 554, 556, this Court,  
 “ speaking by Mr. Justice Bradley, said, in regard to brakes for  
 “ eight-wheeled railroad cars: ‘Like almost all other inventions,  
 “ that of double brakes came when, in the progress of mechanical  
 “ improvement, it was needed; and being sought by many minds,  
 “ it is not wonderful that it was developed in different and indepen-  
 “ dent forms, all original, and yet all bearing a somewhat general  
 “ resemblance to each other. In such cases, if one inventor pre-  
 “ ceeds all the rest, and strikes out something which includes and  
 “ underlies all that they produce, he acquires a monopoly, and subjects  
 “ them to tribute. But if the advance towards the thing desired is  
 “ gradual, and proceeds step by step, so that no one can claim the  
 “ complete whole, then each is entitled only to the specific form of  
 “ device which he produces, and every other inventor is entitled to  
 “ his own specific form, so long as it differs from those of his com-  
 “ petitors, and does not include theirs. These general principles  
 “ are so obvious that they need no argument or illustration to sus-  
 “ port them.’

“ The same view was directly applied in *Clough v. Barker*, 106  
 “ U. S., 166, 177, to the Clough patent for an improvement in gas  
 “ burners. The first claim of that patent was for ‘the bat wing  
 “ ‘burner, perforated at the base, in combination with the surround-  
 “ ‘ing tube, substantially as described.’ The second claim read thus:  
 “ ‘In combination with the bat wing burner, perforated at the base  
 “ ‘and surrounding tube, the tubular valve for regulating the sup-  
 “ ‘ply of external gas to the burner, substantially as described.’ It  
 “ appeared that in no prior structure had a valve arrangement been  
 “ applied to regulate the flow of gas in such a combination as that  
 “ covered by the first claim of the patent. It was therefore held,  
 “ that the patentee was entitled to the benefit of the doctrine of  
 “ equivalents, as applied to the combination covered by the second  
 “ claim. In the defendant’s burner, the regulation was made by a  
 “ tubular valve on the outside of the perforations, instead of on the  
 “ inside as in the patent, but performing its work by being screwed  
 “ up or down, as in the patent. This Court said: ‘Although in

“ ‘the Clough structure the burner and surrounding tube revolve  
 “ ‘together in adjusting their position in reference to that of the  
 “ ‘tubular valve, so as to let in or turn off the supply of gas through  
 “ ‘the perforations, and although in the Clough structure the flame  
 “ ‘revolves by the revolution of the burner, and although in the  
 “ ‘defendant’s burners the revolution of the surrounding tube regu-  
 “ ‘lated the supply of gas through such perforations, and neither  
 “ ‘the burner nor the flame revolved, the defendant’s valve arrange-  
 “ ‘ment must be held to have been an equivalent for that of Clough  
 “ ‘to the full extent to which that of Clough goes—involving, per-  
 “ ‘haps, patentable improvements, but still tributary or subject to  
 “ ‘the patent of Clough. It is true that that patent describes the  
 “ ‘tubular valve as being inside of the burner tube. *But Clough was*  
 “ ‘*the first person who applied a valve regulation of any kind to the com-*  
 “ ‘*combination to which he applied it, and the first person who made such*  
 “ ‘*combination ; and he is entitled, under decisions heretofore made*  
 “ ‘*by this Court, to hold as infringements all valve regulations ap-*  
 “ ‘*plied to such a combination, which perform the same office in*  
 “ ‘*substantially the same way as, and were known equivalents for*  
 “ ‘*his form of valve regulation.’ See also, Duff vs. Sterling Pump*  
 “ ‘*Co., 107 U. S., 636, 639.*”

See also, *Western Electric Co. v. La Rue*, 139 U. S., 601.

Since the number of cases in which the Supreme Court has held the patents to be invalid because they did not cover any patentable invention are so largely in the majority there are but comparatively few of the other kind to be found in which the patents were sustained by that high tribunal. This results from the fact that the number of inventions which creates new machines, or new modes of operations in old machines, are so few in number. When the patent office ceases to issue patents for unpatentable changes and improvements the number of patents issued will be very much reduced. The number then issued will probably not be one-tenth of the number now issued. Inasmuch as there have been some decisions of the Supreme Court of comparatively recent date in which the patented invention have been sustained (those which we have herein cited) it would seem strange that the appellant’s counsel did not cite them in their brief, were it not apparent that the decisions, while sustaining the patents involved in the cases, nevertheless contained such descriptions of what inventions are patentable, as excluded from the list the patent of the appellant. Hence the poverty of the appellant’s brief in the citation of Supreme Court decisions which defined what changes and improvements are patentable and what are not. Is not the fact that the appellant’s brief fails to cite the recent decisions of the Supreme Court with the one exception (*McLain vs. Ortmyer*, 141 U. S., 425, which is a decision *directly against the appellant*) a confession on its part that in its judgment those decisions would not sustain its patent?

### NON-INFRINGEMENT.

We might probably have rested our case with entire safety upon the ground of non-infringement. The appellees do not make or use, and if they were the owner of the appellant's patent they would not make or use the patented rail. The patent has six claims to it. *The appellant admits that as to five of those claims, the appellees have not infringed* which of course means that *they have not used the forms which are covered by five of those claims.* This admission on the part of the appellant of course shows that the appellee did *not make the patented rail as an entire rail.*

As the witness Noble states in his testimony, the patentee was unfair when applying for his patent in presenting the patented rail and stating its advantages over the old form of flat rail, which is shown in figure three of the patent. As already stated, the specifications of the patent admit that rails with the general features of both the tram rail and the ordinary T-rail were old and the patentee did not claim them, but confined himself to the form particularly described in the patent. The old California Street rail had both a foot and web and head and flange, and was of the same general character as was the patented rail. Confessedly the California Street rail was older than the patentee's invention and therefore the patent could not cover anything except the difference between the California Street rail and the rail described in the patent.

It is asserted that the appellee's rail infringes the fifth claim of the patent only. The fifth claim is as follows :

“ In the combined tram and T-rail described, the web, E, *located relatively to the flange A and head, B, offset at C, as described, whereby a maximum capacity of outside pocket is secured with a minimum quantity of metal consistent with the proper stability of the rail, substantially as set forth.*”

This claim is not infringed unless the form which it covers is used. To obtain a full and accurate description of that form, *we do as the claim does and go to the specification and drawings.* The claim itself contains the words “substantially as set forth,” and in its general language requires that the specification and drawings be referred to for the description of the forms covered by the claim. It is a familiar rule when this is done that the claim must be construed with reference to the specification and drawings. As the Supreme Court said in *Seymour vs. Osborne*, 11 Wallace, on page 547, “where the claim immediately follows the description of the invention, it may be construed in connection with the explanations contained in the specifications, and where it contains words referring back to the specifications, it cannot properly be construed in any other way.” This is a familiar rule and is one that is almost self-evident.

Referring to the specifications and drawings for a description of what is covered by the said fifth claim, and particularly of that por-

tion which requires the web, E, to be "*located relatively to the flange, A, and head, B, as described,*" and we find that this relative location places the head entirely to the left hand of the vertical line of the web, and at the same time it places the upper face of the flange, A, over the whole width of the web.

Right in this connection we call attention to the disclaimer in the specifications of the patent, (Record page 43,) where it says in reference to rails which combine the advantages of the tram rail with the advantages of the T-rails.

"*I am aware that rails embodying the general features above mentioned are old, and I therefore disclaim the same, and confine myself to the form hereinafter particularly described and claimed as new.*"

Now the form *claimed as new* in this fifth claim is a form in which the head is at the left hand of the web. *This form is not in the appellee's rail.* On the contrary the defendant's rail has the head located over the web while the flange is to the right of the vertical line of the web. *The form, therefore, which is the only thing covered by the fifth claim is not in the appellee's rail* and this being so, it cannot infringe the patent.

The appellant called upon Henry L. Breevort as an expert to testify in the case. The following quotation from the cross-examination of the expert shows how absolutely wanting in the appellee's rail was the form that must result from having "the web, E, located relatively to the flange, A, and head, B," as required by the fifth claim. The testimony referred to is as follows. Record, pages 23 and 24.

"X. Q. 8. In the patent rail is there any part of the head that is over the web in vertical line?"

"A. No.

"X. Q. 9. In the defendant's rail is the head in vertical line over the web or not?"

"A. The head is over the web.

"X. Q. 10. Then in the respect referred to in the last two questions is the relative location of the head and web, the same in the defendant's rail as it is the patented rail?"

"A. It is not.

"X. Q. 11. In the patented rail is the flange in a vertical line over the web?"

"A. Yes.

"X. Q. 12. In the defendant's rail is the flange in a vertical line over the web?"

"A. No.

"X. Q. 13. Then in this respect is the relative location between the web and the flange the same in the defendant's rail as it is in the patented rail?"

"A. No."

In reading this fifth claim of the patent its meaning may be ar-

rived at by leaving out so much of the last three lines as says: "whereby a maximum capacity of outside pocket is secured with a minimum quantity of metal consistent with the proper stability of the rail." There are two reasons why the claim may be better read without the words above quoted. One is, that the words *merely state the result of the form* which is claimed. They do not claim anything in and of themselves. They form no part of any statement of what is claimed and for these reasons *they are in fact no part of the claim proper*. The other reason is that as the appellee uses its rails no pocket is used for the reception or retention of street ballast. Noble's testimony, Record, last half pages 40 and 41. The appellee's rails are riveted fast and tight to the iron frames that are a part of its road bed, and the road bed is laid with paving stones which stand up alongside of the rails and do not fill the pockets, or hollow spaces that come between the foot of the rail and the upper extension formed by the head on one side and the flange on the other. The street bed and paving used with the appellee's rails are exactly the same as were the old California-street bed and paving, and they are not the street bed and paving described in the patent as being benefitted by the form of the patented rail.

Reading the claim by retaining in it all that tells what is claimed and rejected as surplusage those parts which cover nothing, but only describe the effect produced by what is claimed, and the claim will read as follows:

"In the combined tram and T rail described the web E, located relatively to the flange A and head B; offset at C, as described, substantially as set forth."

It will be noticed that the claim *does not cover the rail as a whole*. It only claims something that is "*in the combined tram and T-rail*." What is it that is *in this combined tram and T-rail that is claimed?* It is the "*web, E, located relatively to the flange, A, and head, B, offset at C, as described*." This is what is claimed *and nothing else is claimed*. The claim may be transposed and show perhaps a better connection by reading it as follows: "*The web E, located relatively to the flange, A, and head, B, offset at C, as described in the combined tram and T-rail substantially, as set forth*." Read the claim as we may and it is obvious that its most important factor *is the relative location* between the web and the head and the flange. This change, which was made by the patentee, from the relative location of the corresponding parts in the old rail on California street, was one of the important changes shown in his specifications and was doubtless one of the changes which obtained for him the patent. At any rate it is one of the limitations that is an important part of the claim, and *as he accepted the patent with this limitation as to form, and as in his specifications he disclaimed all other forms except as are "hereinafter particularly described and claimed as new,"* he and his assignees

are bound by the limitations of the claim.

*Keystone Bridge Co., vs. Phoenix Iron Co.*, 95 U. S. on pages 277, 278 and 279.

*Merrill vs. Yeomans*, 94 U. S. 568.

*Railroad Co. vs. Mellon*, 104 U. S., pages 118 and 119.

*Sargent vs. Hall Safe and Lock Co.*, 114 U. S., pages 85 and 86.

*Western Electric Co. vs. Ansonia Co.*, 114 U. S., pages 451 and 452.

*Burns vs. Meyer*, 100 U. S., page 672.

*Yale Lock Co. vs. Greenleaf*, 117 U. S., pages 558 and 559.

Upon the question of non-infringement see also, in addition to the foregoing :

*Werner vs. King*, 96 U. S., pages 229 and 230.

*Clark vs. Beecher Man. Co.*, 115 U. S., pages 86 and 87.

*Duff vs. Sterling Pump Co.*, 107 U. S. page 639.

*McLain vs. Ortmayer*, 141 U. S., which is the very case cited by the appellant in its brief is decisive upon this point. See pages 424 and 425 of the decision. Appellant has quoted from page 425 of the case, but divided the sentence from which the quotation was made. A continuation of the quotation which the appellant has made is as follows, viz :

“ But if the language of the specification and claim shows clearly “ what he desired to secure as a monopoly, *nothing can be held to be “ an infringement which does not fall within the terms the patentee has “ himself chosen to express his invention.*

“ The principle announced by this Court in *Vance v. Campbell*, “ 1 Black, 427, that where a patentee declares upon a *combination of “ elements which he asserts constitute the novelty of his invention, he “ cannot in his proofs abandon a part of such combination and main- “ tain his claim to the rest*, is applicable to a case of this kind where “ a patentee has claimed more than is necessary to the successful “ working of his device.”

In the case at bar, the patentee has claimed in the fifth claim *a combination of forms*. The claim is not for any one of the several local forms that find their several places in the rail, *but it is for a combination of forms*. To comply with the calls of that claim the very first requirement is “ the web, E, *located relatively to the flange A, and to the head, B.*” This is the first thing to be found in the appellee’s rail before there is any need of looking to see whether the head, B, is offset at C, or not. The language of the claim does not seem to be clear as to whether the patentee means to say that it is the *head* that is “ offset at C,” or whether it is the *web* that is “ offset at C.” This is the only thing that is doubtful about the claim, and this is immaterial. The offset is located and whether it is called an offset of the head or an offset of the web or an offset of both, makes no difference. Whatever it may be that is “ offset at C,” there is no uncertainty as to what “the web E, *located* relatively to



the flange, A, and head, B," means. The specifications explain these relative *locations* fully.

Appellant's brief gives us but very little to reply to. It cites but three cases and those are cited as authority to show, that, as a proposition of law, one claim cannot be so construed as to make that claim cover the same thing that is claimed in another claim. (Page 7 of the brief.) A reference to the authorities cited by appellant shows that the statement in the brief is altogether too strong. The rule which those authorities apply is simply to construe the different claims so that they shall not cover the same thing if this can fairly be done. To this rule *as stated in the citations* of appellant, we have no objection to make.

Whatever the rule may be, we fail to see its application to the second and fifth claims of the patent.

The second claim of the patent is *for the rail as a whole entire rail*, having the head located with reference to the center line of the web, reinforced as at C, and proportioned with reference to all the parts of the rail as described, so that the metal shall be distributed to the several parts, and in such manner as to equalize the contraction in cooling. This claim is for the rail entire. It says:

"A combined tram and T-rail," &c. It is for the entire rail with its parts *proportioned* as described.

The second claim being for the entire rail, the fifth claim calls for certain things that are *contained in* the "combined tram and T-rail" that the second claim calls for. The fifth claim begins by saying: "*In the combined tram and T-rail described*, the web, E, located relatively to the flange, A, and to the head, B, off-set at C, as described," &c.

Now, what is this fifth claim, except claiming certain features that are in the combined tram and T-rail that is covered by claim two? Claim two is for the combined tram and T-rail as a whole with its several parts *proportioned* as described. Claim five is for certain parts of the same rail *located* in a certain manner. The second claim calls for *proportions* of all the parts, while the fifth claim calls for particular *locations* of the parts.

The appellee's rails, however, do not have either the proportions of the several parts, nor do they have the locations of the parts called for, and in whatever manner the claims may be construed *within the terms and language which they employ* there can be no infringement of either of them by the appellee's rails.

The appellant has much to say about even fish-plating, and capacity of outside pocket. There is no evidence showing either of these features to be of the least importance. The appellee's rails have not been used so as to test the importance of either of these features. There is no ground, we think, for supposing that these features are of any importance in practice. Their importance is exhausted in using them as the basis of appellant's argument.

Whatever they may be worth as a basis for appellant's argument we do not think they have any further value.

Look, for instance, at figures B and E and H, of appellant's brief and see the small amount of space that the cutting away of the shaded metal would furnish for street ballast. In a full sized rail, the space gained for street ballast would not exceed one half of a square inch. What difference would a full square inch, more or less, of street ballast amount to in practice? It would never be noticed. Again; does it not seem a little out of reason to imagine that the action of street ballast could possibly be any better than the solid metal of the rail, when used for the mere purpose of filling that space? It certainly looks to the ordinary mind as though the solid metal would be much more solid and much more certain to remain in its place than would be the street ballast, and there is no evidence in the case to show to the contrary.

The rails are naturally cut away in those places to make a symmetrical rail, and not waste metal uselessly. Even if the patentee intended to admit—which we do not believe to be the fact—that rails made like figure A of appellant's brief were old, it would be an admission of something that never occurred in fact. No rail manufacturers have ever yet been guilty of making such a useless waste of metal in manufacturing rails.

See Noble's evidence, Q's. 19 and 20, page 32 of the Record.

Not only do the appellees not use the form covered by the fifth claim of the patent, but they do not so use any form as to obtain the advantages which the *patent* says results from those forms. Even the expert does not testify, nor does the appellant's brief so claim. The expert does say that the appellee's rail possesses the advantages of the patented *rail*. But what seems peculiar is that the advantages which are pointed out as possessed by the TWO RAILS *by the expert* are not the advantages pointed out *by the patent, nor are they any of the advantages which result from the changes which the patentee made*, but they are advantages which were in the old California-street rail or in the ordinary T-rail. The advantages of the patented rail are stated by the expert to be that "it is adapted to be placed on a sleeper below the street level so that the paving can be brought up to it—it has a head for the bearing of the wheel, a flange which permits ordinary street traffic, a vertical web and foot," etc. Up to this point no advantages are stated except what were used in the old California-street rail. That rail was adapted to be placed on a sleeper below the street level; and it *was* placed below the level of the street and the paving was brought up to it just as the paving is brought up to the appellee's rails. The old California-street rail is there now just as it was before the patented rail was thought of, and an inspection of that rail now and a comparison of it with the appellee's rail on the Sutter street road will show that in this matter of advantages

they are alike. Both are placed below the street level and are paved in alike. Both have heads for bearings for the car wheels alike. Both have flanges alike which permit ordinary street traffic. Both have horizontal feet and vertical webs. Both also have pockets between the foot and web which *might* be used for the reception and retention of street ballast, *but which never were so used by either*. As to all these so-called advantages *none of them are due to the patent*. They all existed before, although the pockets were a little less in the old rail because it was not so high. It had a narrower web. If the web in the California-street rail had been made as high as in the patented rail then the said pocket would have been greater since no part of the space would have been occupied by the offset, as explained in Mr. Noble's testimony. Record, side page 54. If even fish plating is any advantage the old ordinary T-rail possessed it.

Another advantage, so-called, which the patent expatiates largely upon is the forming of the head, web and flange so that there is an equal amount of metal in each, and thereby securing equal shrinkage and avoiding the necessity for "cambering" the rails. While it is not true that the patent does this it is true that the appellee's rail has no such distribution of metal and it had to be "cambered" more than had ordinary rails. This is because the head extends over the web and makes the mass of metal very great and heavy from the top of the head to the bottom of the flange. Both from the evidence of Mr. Noble and from the explanations of the patent it is apparent that the appellee's rail requires great amount of cambering.

See Noble's testimony. Record, side pages 54 and 55.

From all this it is apparent that the attempt to show that the appellee's rail is indebted to the *patent* for its advantages, is unsuccessful. While the appellant has labored to show that the two *rails* possess in many respects the same advantages, it has stopped short of proving that those advantages resulted from the alleged invention and were not advantages which belonged to the older rails or that they were not advantages already enjoyed by the public at large.

Appellees, therefore, ask for an affirmance of the decrees of the Circuit Court in both cases upon the grounds :

1st. That the patent is invalid because it does not cover any patentable invention ; and

2nd. Because the appellees have not infringed the patent.

The opinion of the Circuit Court is in the Record, from page 12 to page 19. (47 Federal Reporter, 586.) To that opinion we refer as an able analysis of the questions involved and an additional authority to those herein before cited.

Respectfully submitted,

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I. M. KALLOCH,  
F. J. KIERCE,

*Counsel for Appellees in both cases.*



*In the United States Circuit Court of Appeals for the Ninth Circuit.*

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THE JOHNSON COMPANY,

Appellant,

vs.

PACIFIC ROLLING MILLS COMPANY,

and

THE JOHNSON COMPANY,

Appellant,

vs.

SUTTER STREET RAILWAY COMPANY.

Nos. 33 & 34.  
Filed July 18, 1892.

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*Appeal from the Circuit Court of the United States for the Northern  
District of California.*

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Before MCKENNA and GILBERT, Circuit Judges, and DEADY,  
District Judge.

By the Court,

MCKENNA, J.:

The patent in this case is for a form of street rails.

The patentee in his specifications admits that rails embodying the general features of his rail were old, and we think his special form involved no invention.

It was but an obvious application of what had preceded.

Judgment is therefore affirmed.

